

white to their bases. Hands and feet grey. Tail blackish brown above, whitish below.

Skull very like that of *A. varius*; interorbital region not quite so broad, similarly square-edged, without definite ridges. Incisors slightly more slender.

Dimensions of the type:—

Head and body 98 mm.; tail 79; hind foot 24; ear 18.

Skull: greatest length 28.5; condylo-incisive length 27; zygomatic breadth 14.7; nasals 10.2; interorbital breadth 4.6; breadth of brain-case 12.2; palatilar length 12.6; palatal foramina 7; post-foraminal palate 4; upper molar series 4.9.

Hab. Tucuman. Type from Villa Nouges, San Pablo. Alt. 1200 m.

Type. Adult male. B.M. no. 2. 1. 5. 8. Original number 1365. Collected 22nd September, 1901, by L. Dinelli. Presented by Oldfield Thomas. Six specimens.

While this species resembles *A. varius* in the buffy or clay-colour of the dorsal suffusion, it differs by the contrasted grey of the head, shoulders, flanks, and hips, which give it a deceptive resemblance to the species of *Abrothrix*. But there is no doubt that its nearest relationship is with the first-named animal. Its peculiar white chin is unique, but I should not lay very much stress on this character, which may easily prove variable.

XL.—*The Grouping of the South-American Muridæ commonly referred to Akodon.* By OLDFIELD THOMAS.

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IN his 'Mammals of Patagonia' Dr. J. A. Allen has drawn attention to the composite nature of what is usually called *Akodon*, and has indicated one or two groups which he thinks ought to be generically or subgenerically distinguished—for example, those named below *Chalcomys* and *Chrocomys*.

I have now had an opportunity to examine the whole group, which I find—uniform as it is in essential characters, and notably in the hypsodontism and general structure of the teeth—may be subdivided into seven genera. Of these, three—*Akodon*, *Abrothrix*, and *Zygodontomys*—were previously provided with names, while four need new ones. Two of these four are inhabitants of the Andean plateau and two of the lowlands of Brazil. A special subgenus is also made for *A. cerosus*, *A. urichi*, and their allies.

The following key to the genera may assist in the determination of specimens :—

- A. Supraorbital edges more or less squared.
- a.* Claws normal. Bullæ not enlarged.
- a*². Form unmodified; tail of medium length; eyes not reduced.
- a*³. Supraorbital edges square or beaded, but without overhanging ledges.
- a*⁴. Supraorbital edge beaded. *M*¹ without notch on anterior face I. *Zygodontomys*.
- b*⁴. Supraorbital edge not or scarcely beaded. *M*¹ with anterior notch II. *Akodon*.
- a*⁵. Fur normal. Colour grey, olivaceous, or pale brown II. A. *Akodon*, s. s.
- b*⁵. Fur velvety. Colour dark brown or coppery II. B. *Chalcomys*.
- b*³. Supraorbital edges with overhanging ledges. *M*¹ with notch III. *Thalpomys*.
- b*². Form *Pitymys*-like, with short tail and reduced eyes. *M*¹ with notch IV. *Thaptomys*.
- b.* Claws elongated. Interorbital region broad, with squared edges. Bullæ enlarged. *M*¹ without notch V. *Bolomys*.
- B. Supraorbital edges rounded. *M*¹ without anterior notch.
- a.* Snout not elongated. Brightly contrasted markings present. Fore-claws lengthened. Bullæ large VI. *Chromomys*.
- b.* Snout elongated. Coloration normal. Fore-claws not lengthened. Bullæ normal VII. *Abrothrix*.

I. ZYGODONTOMYS, Allen.

Form normal. Fur coarse. Colour coarsely lined brown, the lining heavier than in any other members of the group. Claws of normal proportions, the fourth * fore-claw 2·1 mm. in a specimen with hind foot 24 mm., and the fourth hind claw 2·6 mm.

Skull comparatively strongly built, its upper outline evenly bowed. Supraorbital edges square, with well-defined beads running back across the parietals. Zygomatic plate well thrown forward, its front edge often slightly concave. Palatal foramina scarcely or not narrowed behind, and not penetrating so far between the molars as in most of the succeeding genera.

First molar without a deep groove separating the two cusps of the anterior lamina.

* Although the third claw is generally a little longer than the fourth, the two vary together, and there seems no objection to taking the length of the fourth as being by far the most convenient to measure on dried skins, the third being commonly hidden behind the fourth. In measuring the corresponding claw behind, care must be taken to remember the reversed position of the foot in modern skins.

Genotype. *Z. cherriei*, Allen (*Oryzomys cherriei*, Allen).

The recognition of *Zygodontomys* as a genus distinct from *Akodon* is somewhat provisional, and can only be finally settled when specimens with unworn molars of many more species are available for examination. Such species as *Akodon lenguarum* undoubtedly tend to connect the two groups, but without a series of young specimens a definite conclusion is not easy to arrive at.

II. AKODON, Meyen.

Fur generally less coarse than in *Zygodontomys*. Colour variable, the more typical species greyish olivaceous, without special markings. Claws rather variable, the members of the *obscurus* group with rather longer fore-claws than is the case in the others; a specimen of *A. boliviensis* has fourth fore-claw 2.0 mm., hind 2.7, of *A. obscurus* fore 2.7, hind 3.7.

Skull more lightly built than in *Zygodontomys*. Interorbital region fairly narrow, its edges squared more or less sharply, and occasionally with slight beading, but never with overhanging ledges. Palatal foramina usually narrowed behind, penetrating far between the molars. Bullæ comparatively small.

First upper molar with a well-defined groove or valley on its anterior surface between the cusps of the first lamina; this wears out as age advances, but slight traces of it may generally be perceived.

Two subgenera, as follows:—

II. A. AKODON, s. s.

Fur normal. Colour grey, pale brown, or olivaceous.

Skull of normal shape; the brain-case and interorbital region fairly narrow.

Genotype. *Akodon boliviensis*, Meyen.

II. B. CHALCOMYS, subgen. nov.

Fur fine and velvety. Colour dark brown or coppery, the under surface scarcely lighter than the upper.

Skull with large rounded brain-case and broad interorbital region.

Genotype. *Akodon (Chalcomys) cerosus*, Thos.

Other species: *urichi*, All., *venezuelensis*, All., *meridensis*, All.

This subgenus contains the blackish Akodons, which, like *Melanomys* in relation to *Oryzomys*, form a special group in the tropical countries of north-western South America.

Even after the removal of the members of *Chalcomys*, the genus *Akodon* tends to divide into two—the more typical species, light and delicate, with thinly built skulls, and generally of a more uniform olivaceous colour, and those with comparatively heavy skulls, and with their colour more contrasted with blackish lining. The latter group seem to approach *Zygodontomys*, and may prove to intergrade with it.

III. THALPOMYS, gen. nov.

Fur crisp. Colour of only species warm ochraceous or rufous. Fourth fore-claw 2·0 mm., hind 2·2.

Skull and teeth as in *Akodon*, except that there is a distinct overhanging ledge on each edge of the interorbital region. Palatal foramina long, much narrowed behind.

First molar of the only specimen available, although worn, showing clear trace of an anterior groove.

Genotype. *T. lasiotis* (*Mus lasiotis*, Lund; *Habrothrix lasiotis*, Winge).

IV. THAPTOMYS, gen. nov.

General build modified for a subterranean life, very much as in the most marked species of *Pitymys*, the fur short and velvety, the eyes reduced in size, and the tail shortened. Fore and hind claws about equal, the fourth 2·6–2·8 mm. in length.

Skull strongly built; interorbital region very broad, with squared edges. Zygomatic plate scarcely projected forwards. Palatal foramina smallest in the group, narrow, scarcely reaching the level of m^1 . Bullæ small.

First molar with anterior notch.

Genotype. *T. subterraneus* (*Hesperomys subterraneus*, Hens.). (This is probably a synonym of "*Mus nigrita*," Licht., but I use a name about whose identification there can be no doubt.)

A genus distinguished by the modifications due to a more completely subterranean life.

V. BOLOMYS, gen. nov.

Fur normal or rather coarse. Colour strongly lined, with contrasted light underside. Claws elongated, the fore nearly as long as the hind; in *B. albiventer* the fourth may attain 3·3 mm. in front and 3·5 behind.

Skull stout and strongly built, with broad square-edged interorbital region. Zygomatic plate projected forward.

Palatal foramina narrowed behind, continued well between the molars. Bullæ very large.

First molar apparently without anterior notch, but quite young specimens are not available.

Genotype. *B. amarus* (*Akodon amarus*, Thos.).

Other species: *B. albiventer*, Thos., *B. berlepschi*, Thos.

By its large bullæ and long claws *Bolomys* resembles *Chæomys*, but the general facies and the structure of the rest of the skull seem to indicate a nearer relationship to *Akodon*.

The three species are all inhabitants of the Andean highlands.

VI. CHRÆOMYS, gen. nov.

Fur long, soft, and fine. Coloration very striking, with contrasted patches of white or ochraceous. Ears large. Claws long, the anterior exceeding the posterior; fourth fore claw in *C. pulcherrimus* 4.0 mm., fourth hind 3.6.

Skull with large rounded brain-case. Interorbital region with its edges smoothly rounded. Zygomatic plate scarcely projected forward. Palatal foramina of medium length. Bullæ very large.

Incisors unusually slender, their front surface a paler yellow than in the other genera. First molars without anterior notch.

Genotype. *C. pulcherrimus* (*Akodon pulcherrimus*, Thos.).

Other species: *C. bacchante*, Thos., *jelskii*, Thos., and probably *scalops*, Gay.

VII. ABROTHRIX, Waterh.

Fur long and soft. Coloration normal—generally slaty grey with a suffusion of buffy in the dorsal area. Claws not elongated.

Skull with rounded brain-case and long muzzle. Interorbital region of medium breadth, its edges smoothly rounded. Bullæ of normal size, not enlarged.

First molar without anterior notch.

Genotype. *A. longipilis*, Waterh.

Other species: *A. hirtus*, Thos., *suffusus*, Thos., *francei*, Thos.